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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,669	09/12/2003	Duane Treybig	7726-ONES	9132
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NALCO COMPANY 1601 W. DIEHL ROAD NAPERVILLE, IL 60563-1198			EXAMINER TOSCANO, ALICIA	
			ART UNIT	PAPER NUMBER
			1796	
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			02/06/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/661,669

Applicant(s)

TREYBIG ET AL.

Examiner

ALICIA M. TOSCANO

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-7,9-11,16-25 and 29-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,9-11,16-25 and 29-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 2, 3, 8, 12-15 and 26-28 have been cancelled. Rejection over said claims is thusly removed.
2. 103(e) rejection over Treybig is overcome by amendment.
3. 102(b) over McCoy is overcome by Applicant's arguments. Applicant argued the composition of McCoy is used as a post treatment of the emulsion after the emulsion is removed from the well, and thusly doesn't meet the requirements of the claim (a method of treating a well). Examiner agrees. Bitumen emulsions in the oil industry are made in the well so as to enhance the production of the bitumen out of the well. The composition is then treated with a demulsifier to separate the bitumen from the remaining solution. There is no evidence nor motivation of record which suggests breaking the emulsion in the well, since the emulsion is specifically formed so that the bitumen can be pumped out of the well.
4. 103(a) rejections over Treybig v. Gupta, Treybig in view of Bruhnke, Treybig (alone) and Treybig v. Soula are overcome due to amendment.
5. New grounds of rejection are set forth below due, in part, to Applicant's amendment.

Claim Objections

6. Claim 24 is objected to because of the following informalities: dipropylene glycol methyl ether is repeated twice. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claim 29 is rejected under 35 U.S.C. 102(b) as being anticipated by McCoy.

McCoy discloses a demulsifier for subterranean formations (abstract and Column 1 Lines 22-25). Said demulsifier is prepared by the reaction between polyoxyalkylene diamines and diepoxides. The polyoxyalkylene diamine can be a JEFFAMINE as in Example 1, which has both alkylene oxide moieties and an amine with 2 reactive hydrogens. Use of a 1 wt% of the demulsifier is used as disclosed in Example X1, thus meeting the requirements for Claim 29. Inclusion of an acid is disclosed in Column 2 line 40, as further required by the claim.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1, 4-7, 9-11, 16-17, 19, 20, 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Treybig (US 6569983) in view of Marten (US 5977286)

Treybig discloses a composition for recovering hydrocarbon fluids from a subterranean reservoir. Said composition comprises a branched polyhydroxyetheramine prepared by reacting an amine having two reactive hydrogen

atoms with a diepoxide followed by an N-alkylating agent (abstract, Claim 1), said amine can have alkylene oxide functionality (figure g depicts an amine with 2 active hydrogens and alkylene oxide units in its backbone). The polyhydroxyetheramine may be reacted with an acid (Column 7 line 36), as further required by the claim. This amine alone meets the requirements of the polyhydroxyetheramine composition of Claim 1 and the reaction meets the requirements of Claim 29. Without knowing the molecular weight of the polyhydroxyetheramine it is impossible for the Examiner to calculate the weight percent of applicants vs. the volume % disclosed by '983, however since the solvent is water and only 2000 ppm of active material, or polyhydroxyetheramine, is disclosed to be used for treatment (Column 14 Line 13) Examiner finds the volume percent of 0.005 to 2 to overlap with a weight percent of 0.005 to 2.

The alkylene oxide functionalized amines are disclosed in figures b, c, f and g (Column 4 and 5), meeting the requirements for Claim 4, the amines having 2 reactive hydrogen atoms are found in figures a, d and e, as required for Claim 5. R, R2 and Z are disclosed in Column 5 Lines 49-52, meeting the requirements for Claim 6. The amine having 2 reactive hydrogen atoms is further disclosed in Column 5 Lines 53 to Column 6 Line 5, meeting the requirements for Claim 7, the use of secondary, tertiary and ditertiary amines are disclosed in Column 6 Line 25-29, as required for Claim 16.

Reacting a polyhydroxyetheramine (which has substituents of alkylene oxide and 2 reactive hydrogen groups as shown in figures a-g) with a diepoxide and then reacting that product with an amine having 1 or 2 reactive hydrogen atoms is disclosed in Claim 9 of '983, meeting the requirements for Claims 17 and 31. The use of a mixture of

diepoxides and aliphatic or aromatic triepoxides is disclosed in Column 6 Lines 20-24, as required by Claim 19 and the use of an acid after the reaction of the amine is as above, as required for Claim 20.

Treybig includes elements set forth above. Treybig includes the use of epoxides such as diglycidyl ethers of butanediol, neopentylglycol and the like (Column 6 lines 10-19). Treybig does not include the use of the diglycidyl ethers of polyhydric phenols, as required by the newly amended claims.

Marten discloses amine-modified epoxy resins. The reaction comprises reacting polyglycidyl ethers with various amine compounds. The amine compounds have 2 or more reactive hydrogen atoms (see Figs in Col 5&6) and thusly the reaction between said amines and said epoxides is similar to that of Applicant. Marten discloses the polyglycidyl ether to be butanediol diglycidyl ether, neopenylglycol diglycidyl ether (Column 7 lines 64-65) and glycidyl ethers derived from polyhydric phenols (Column 7 line 38). Marten thusly teaches the functional equivalence of said glycidyl compounds.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Treybig the use of diglycidyl ethers of polyhydric phenols, as taught by Marten, since they are recognized in the art as functional equivalents of the diglycidyl ethers of Treybig. Use of bisphenol A is disclosed in Column 7 line 45. The requirements of all the claims are thusly met.

9. Claims 21, 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Treybig and Marten in view of Gupta (US 2003/0008781).

Motivation to include of the teachings of Gupta in Treybig are as set forth previously, however the rejection is amended in view of Marten due to Applicant's amendment.

Remarks:

Applicant argues the Gupta does not make up for the deficiencies of Treybig, Examiner disagrees, Treybig is not deficient, as discussed above. Applicant further argues the use of the polyhydroxyetheramine in a known process or in combination with known ingredients of Gupta is nonobvious. Examiner disagrees. As previously set forth, it would have been obvious to one of ordinary skill in the art to include in Treybig the addition of stabilization salts, as taught by Gupta, in order to increase the permeability of the clay in the subterranean formation.

10. Claims 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Treybig and Marten in view of Soula (US 4417048).

Motivation to include the teachings of Soula in Treybig are as set forth previously, however the rejection is modified to be in view of Marten due to Applicant's amendment.

Remarks:

Applicant argues Soula does not make up for the deficiencies of Treybig. Applicant argues Soula discloses nothing more than the alkylation of amines having a

reactive amino hydrogen with alkylating agents. Applicant argues the basic conditions of Soula will not result in salt formation. Applicant further argues Soula teaches nothing regarding the equivalence of methyl chloride and chlorooctane apart from being used to alkylate the amines disclosed therein.

Examiner disagrees. Regarding Treybig, Treybig and Marten are not deficient and thusly comments drawn to such are moot. Soula teaches the functional equivalence of methyl chloride and chlorooctane. The motivation is proper. That the akylation is preformed on different amines is moot since one would have a reasonable expectation of success when using one for the other. That the reaction of Soula is basic and a salt is not formed is moot since Soula is use solely to teach the use of methyl chloride. Said salt would be inherent in the composition of Treybig, Marten and Soula since the compositional elements are met.

11. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Treybig and Marten in view of Bruhnke (US 5773405).

This rejection is as set forth in the previous action dated 8/2/06, the motivation to include Bruhnke is as set forth previously, the rejection is amended to include Marten.

Remarks:

Applicant argues Bruhnke discloses a fundamentally different polymer than Treybig and the references are thusly not combinable. Applicant argues the monomeric amines are not the amines of Applicant.

Examiner disagrees. Applicant's arguments are drawn to one example of the polyoxyalkyleneamines of Bruhnke. Bruhnke discloses a myriad of possible amines in Column 10 Lines 17-42. It is still the Examiner's position that these amines are so closely similar, if not overlapping, with Applicant's claimed amines that the amines would act similarly and one would include a solvent, as taught by Bruhnke, to increase the solubility of the amines. Examiner argues that there is a reasonable expectation of success to include the solvents of Bruhnke. Examiner previously expressed the need for Applicants to submit experimental results showing that the materials of Treybig and Bruhnke are different since it was the Examiners position that the polyhydroxyetheramines are similar if not identical materials. The Examiner continues this position. Applicant questions how unexpected results can be shown and the Examiner puts forth that the Applicant can show that 0.005-2% of solvent affects the solubility of Applicant's amines differently than those claimed by Bruhnke. Examiner further requested unexpected results when using 0.005-2% of the solvent in the composition. Applicants state that they are at a loss as to how he can show any unexpected result. Examiner notes that data showing (1) a composition with no solvent versus (2) a composition with 0.005% solvent may be submitted so that unexpected results can be ascertained.

12. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Treybig and Marten.

Elements of Treybig are as set forth above and previously. Treybig includes the use of epoxides such as diglycidyl ethers of butanediol, neopentylglycol and the like (Column 6 lines 10-19). Treybig does not include the use of the diglycidyl ethers of polyhydric phenols, as required by the newly amended claims.

Marten discloses amine-modified epoxy resins. The reaction comprises reacting polyglycidyl ethers with various amine compounds. The amine compounds have 2 or more reactive hydrogen atoms (see Figs in Col 5&6) and thusly the reaction between said amines and said epoxides is similar to that of Applicant. Marten discloses the polyglycidyl ether to be butanediol diglycidyl ether, neopentylglycol diglycidyl ether (Column 7 lines 64-65) and glycidyl ethers derived from polyhydric phenols (Column 7 line 38). Marten thusly teaches the functional equivalence of said glycidyl compounds.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Treybig the use of diglycidyl ethers of polyhydric phenols, as taught by Marten, since they are recognized in the art as functional equivalents of the diglycidyl ethers of Treybig. Use of bisphenol A is disclosed in Column 7 line 45. The requirements of all the claims are thusly met.

Remarks:

Applicant argues Treybig discloses both a different alkylating agent and a different base polymer.

Examiner disagrees for the reasons set forth in Treybig above, the alkylating agent is optional and the base polymer is met by Treybig and Marten.

13. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Treybig and Martin, or Treybig and Marten in view of Soula.

Rejection over Treybig alone was set forth in the action dated 1/16/07, said rejection is amended to include Marten due to Applicant's amendment. The rejection is reinstated since the claim allows for either acid OR an agent of the R14X and Treybig discloses in Column 7 line 36 reaction of the polyhydroxyetheramine with an acid. Rejection over Treybig in view of Soula is as set forth previously amended to include Marten due to Applicant's amendment. Elements of Treybig v. Marten are as set forth above.

Remarks:

Applicant argues the claimed invention is not taught or suggested by Treybig v. Soula. Examiner disagrees, the rejection has been modified due to Applicant's amendment and meets all the limitations of the claims.

14. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCoy in view of Bruhnke.

McCoy includes elements as set forth above. A composition comprising 1 wt% of the polyhydroxyetheramine is disclosed in Column 2 line 40. Addition of an acid, HCl, is

also disclosed in Column 2 line 40. The polyhydroxyetheramine set forth above meets the compositional requirements of the amine.

McCoy does not include the use of a solubilizing agent. Bruhnke discloses a cleaner composition with a reactive dye colorant. Said cleaner contains 0-35% solvent and 1 to 5000 ppm of a polyoxyalkylene-substituted colorant (Column 4 Lines 10-14). Said colorant contains JEFFAMINE groups, which are polyhydroxyetheramines containing alkylene oxide units and 2 active hydrogens (Column 10 Lines 17-42). Bruhnke discloses the addition of solvent as a solubilizing agent to the cleaner. Said solubilizing agents include ethylene glycol monobutyl ether (Column 3 Lines 34-35), as required by Claims 23 and 24. It is the Examiner's position that these JEFFAMINE's are similar, if not the same, as that of McCoy and one would have a reasonable expectation success that the solvent would act similarly in the composition of McCoy and Bruhnke.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in McCoy the use of solubilizing agents, as taught by Bruhnke, in order to increase the solubility of the polyhydroxyetheramine and to keep the solution homogeneous.

See MPEP 2144.05, "A prior art reference that discloses a range encompassing a somewhat narrower claimed range is sufficient to establish a prima facie case of obviousness" In re Peterson, 315 F.3d 1325, 65 USPQ2d 1379 1382-93

15. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCoy and Bruhnke in view of Gupta.

McCoy and Bruhnke include elements as set forth above. McCoy and Bruhnke do not include the use of clay stabilization salts.

Gupta discloses the use of clay stabilization salts in subterranean formulations. Clay swells when contacted with treating fluids and salts are taught by Gupta to be added to a fluid in order to prevent or reduce said swelling. It is the Examiner's position that the fluids of McCoy, since they are subterranean compositions comprising elements from the wellbore, would have clay suspended in the fluid since clay is a common underground element and since the geological definition according to the Schlumberger Oilfield dictionary (copy included) defines clay as "fine grained sediments of a size less than 0.0039 mm". Sediments of said size range would be found in the composition of McCoy since McCoy is drawn to compositions of tar sands (bitumen).

Gupta discloses using 2 or 3 weight percent of a stabilization salt, whereby said salt can be ammonium chloride [0006], as required for Claims 21 and 22. It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Trebybig the use of stabilization salts, as taught by Gupta, in order to increase or maintain stabilize the clay particles in the composition.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory

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obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 4, 5, 6 and 7 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13, 2, 3 and 4 of U.S. Patent No. 6569983 in view of Marten US 5977286. Claim 13 of '983 discloses a method comprising the polyhydroxyetheramines of instant claim 1. The alkylating agent of instant claim 1 is optional. Since the composition is aqueous the Examiner finds the vol% and wt% would be close in value and thusly would anticipate the claim. '983 (Treybig) includes the use of epoxides such as diglycidyl ethers of butanediol, neopentylglycol and the like (Claim 6). Treybig does not include the use of the diglycidyl ethers of polyhydric phenols, as required by the newly amended claims.

Marten discloses amine-modified epoxy resins. The reaction comprises reacting polyglycidyl ethers with various amine compounds. The amine compounds have 2 or more reactive hydrogen atoms (see Figs in Col 5&6) and thusly the reaction between said amines and said epoxides is similar to that of Applicant. Marten discloses the

polyglycidyl either to be butanediol diglycidyl ether, neopenylglycol diglycidyl ether (Column 7 lines 64-65) and glycidyl ethers derived from polyhydric phenols (Column 7 line 38). Marten thusly teaches the functional equivalence of said glycidyl compounds.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Treybig the use of diglycidyl ethers of polyhydric phenols, as taught by Marten, since they are recognized in the art as functional equivalents of the diglycidyl ethers of Treybig.

Thusly, '983 and Marten anticipate instant claim 1. Claim 2 of '983 meets the monomer requirements of instant claims 4 and 5, claim 3 of '983 meets the R requirements of instant claim 6 and claim 4 of '983 meets the amine requirements of instant claim 7.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALICIA M. TOSCANO whose telephone number is (571)272-2451. The examiner can normally be reached on M-F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMT

/Randy Gulakowski/
Supervisory Patent Examiner, Art Unit 1712